

OSTEOARTHRITIS

* Definition :-

- Is a degenerative wear & tear process of joints. (old age).

* Aetiology & types

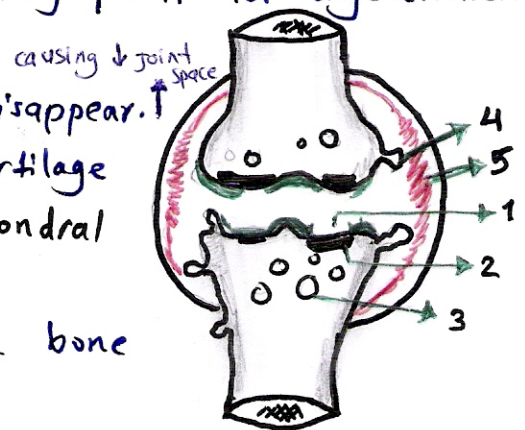
- ① Primary :- Part of the ageing process especially in obese.
- ② Secondary :- there is a cause accelerate wear & tear :- by
 - Trauma :- intraarticular fracture, torn meniscus, loose bodies, recurrent subluxation, ... etc.
 - Deformity :- coxa vara, genu valgum, varus, ... etc.
 - Avascular necrosis : e.g. Perthes disease.
 - Joint diseases : e.g. rheumatoid arthritis & haemophilia.
 - others :- e.g. slipped upper femoral epiphysis, Paget, ... etc.
 - infection :- septic arthritis, TB arthritis, ... etc.

* Pathology :-

- The lesion usually monoarticular (mainly hip or knee).
- the articular cartilage is the starting point for degeneration:-

(a) at Pressure areas:-

- 1- areas of cartilage are worn off & disappear.
- 2- the exposed bone under worn cartilage becomes dense & ivory-like (subchondral sclerosis) with effusion of joint
- 3- fluid of joint pushed inside the bone forming subchondral cysts.



(b) at non-Pressure areas:-

- 4- osteophytes are formed (rim of new bone) at margin of joint.
- 5- Joint capsule undergoes fibrosis & thickened and may ossify at bone attachment site.
- 6- Loose body of osteophyte may occur → locking of knee and capsule fibrosis → stiffness & pain.

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* Clinical Picture:-

C/O - Pain & stiffness are the main symptoms; Pain is worse on movement & weather change, stiffness is most marked in morning & less at end of day.

- Occasionally complains of a sense of creaking of joint and attacks of locking by loose bodies

O/E - Swelling :- by effusion & thickened synovial membrane and in late stages osteophytes may be palpable.

- stiffness:- Limitation of movements (never absolute), usually painless movement.

- Deformity: - in hip :- flexion, adduction & external rotation
- in Knee :- flexion deformity. → Position of ease.

- **Coarse crepitus**:- a sense of grating or creaking during movement due to friction between roughened surfaces.

- Apparent shortening and muscle spasm.

* Investigations :-

X-ray shows :- 1- Diminished joint space & irregular margin.

2- Subchondral sclerosis & cysts.

3- marginal osteophytes.

* Treatment :-

⑨-Conservative treatment: includes:

- Social adjustment :- restrict activity within Pain tolerance, excercises within Pain limits, correct obesity, walking stick by opposite hand to ↓ Wt on joint.

- Analgesic drugs.

- Heat :- as hot water bottle , shock wave therapy.

- Intra-articular injections of local anaesthetic, hydrocortisone in acute episode of pain (but can ↑ worn & tear).

(b) Operative treatments in severe pain interfere w sleep, deformity--

- osteotomy, arthrodesis, but the Golden management is arthroplasty (as total hip or knee replacement).

Operative ttt of osteoarthritis of hip include:-

- ① Subtrochantric osteotomy :- to correct deformity, and relieves pain by relaxing fibrosed capsule.
- ② Arthrodesis:- in young pt with unilateral disease and a normal spine & knee movement.
- ③ Arthroplasty:- Prosthetic replacement arthroplasty (total hip replacement) is the ideal ttt.

CHONDROMALACIA PATELLAE :-

- Is a degenerative condition of articular cartilage of patella, frequently in young adults.
- affects medial surface of patella > Lateral.
- the cartilage is roughened & fibrillated.
- In most cases changes are reversible & symptoms disappear, in few cases → osteoarthritis.
- Pain & stiffness especially felt on starting movement after rest, or on going up or down the stairs.
- Usually response to analgesia, heat.
- Persistent cases → erosion of articular surface or even patellectomy.